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HEWLETT-PACKARD COMPANY

Intellectual Property Administration

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EXAMINER

SCHUBERT, KEVIN R

ART UNIT

PAPER NUMBER

2137

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/918,326

Applicant(s)

HARRISON ET AL.

Examiner

Kevin Schubert

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 07302001.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Claims 1-11 have been considered.

Title

5 A new title is suggested by the examiner. The current title "Document Transmission Techniques II" is not descriptive. The examiner suggests "Authentication Method in a Printing Environment". A new
10 title is suggested but not required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness
15 rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
20

Claims 1-4 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over
Mandelbaum, EP Patent No. 0671830A2, in view of DeBry, U.S. Patent No. 6,385,728.

25 As per claims 1 and 10, the applicant describes a document printout device for receiving and printing out digital documents, the printout device comprising:

a) a store of digital certificates, each certificate being associated with a received digital document
(DeBry: Col 9, lines 16-27);
30 b) an audit log comprising a list of received document entries, each entry containing a reference to one of the certificates in the store and a unique identifier associated with a received digital document
(Mandelbaum: Col 7, lines 7-13; Table 404 of Fig 4);

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The applicant discloses a system in a printing environment where authentication takes place of a user before a user is allowed to print a document. The system is constructed so that a sender sends his certificate so that he can be authenticated by the end printer or fax machine. The end printer or fax machine then places the certificate in a store and places an entry for a document to be printed in a log until authentication has taken place.

Mandelbaum discloses a system in a printing environment which has the same goal of authenticating the intended recipient before a document is allowed to print. Mandelbaum also discloses part b, the idea of the audit log. Table 404 of Fig 4 illustrates what the audit log looks like. The audit log also accounts for a unique identifier of the messages, which is the listing of the recipient and fax number. The recipient can then enter an identifier in the fax machine and print his document once authentication has taken place (Col 7, lines 7-13). The log also accounts for a reference to a digital certificate by way of the flag specifying whether the message was sent using the public key of the recipient or the private key of the sender. If the message was sent using the private key of the sender, a method of obtaining the public key of the sender is needed. A common way of obtaining the public key of someone is through their digital certificate.

Mandelbaum fails to disclose part a), which is the use of a store of certificates. DeBry discloses a similar printing environment, which is applicable to fax machines (Col 12, lines 19-21), in which a store of certificates is maintained. Regarding part a), the applicant writes, "The receiving step preferably comprises receiving a digital certificate of the sender... This method may further comprise carrying out an on-line check of the validity of the sender's certificate. This feature provides increased security as the authenticity of the sender can be verified via an independent certificate issuing authority" (Applicant: Page 7). DeBry discloses that the user or sender in the system sends a digital certificate to the print server. The print server may authenticate the user online through a certificate authority. The certificate is stored at the print system so that the printer can use the user's public key to decrypt a random message sent between the user and the printer. Since DeBry discloses that end-users submit print jobs (Col 9, lines 33-34), it is inherent in the design that the print server retains more than one certificate so that it can validate more than one end-user.

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It would have been obvious to one of ordinary skill in the art at the time the invention was filed to add the idea of retaining certificates as disclosed by DeBry to the system of Mandelbaum because a certificate serves the purpose of providing a public key of a sender and verifying that the sender is who he purports to be. Since a sender in Mandelbaum's system can encrypt a message using his private key
5 (Mandelbaum: Col 2, lines 50-53), it would have been obvious to maintain the digital certificate of the sender so that the recipient can have quick access to the sender's public key. Since table 404 of Mandelbaum already references whether a sender's private key is used, it would have been obvious to have a quick secure way to obtain the sender's public key to decrypt the message when the flag is set.

The applicant should note that while Mandelbaum discloses that a smart card could be used to
10 decrypt the encrypted message, Mandelbaum also discloses that decryption can take place simply after a user enters a login and password (Col 2, lines 35-37). This means that decryption can take place on the fax apparatus, so the fax apparatus would need to have a store of sender's public keys for decryption of messages encrypted with a sender's private key. This store could be accomplished through a certificate store where the public keys of the senders are in the sender's certificates.

15 Regarding claim 10, both Mandelbaum (Abstract) and DeBry (Col 12, lines 19-21) disclose the use of a fax machine environment.

As per claim 2, the applicant describes a device according to claim 1, which is met by Mandelbaum in view of DeBry (see above), with the following limitation which is met by DeBry:

20 Wherein the device is arranged to carry out an on-line authentication of a received certificate held in the store of received documents (DeBry: Col 9, lines 16-27);

The use of carrying out an on-line authentication of a received certificate through a certificate authority is disclosed by DeBry.

25 As per claim 3, the applicant describes a device according to claim 2, which is met by Mandelbaum in view of DeBry (see above), with the following limitation which is met by DeBry:

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Wherein the device is arranged to carry out a batch of on-line authentications of received certificates held in the store of received documents (DeBry: Col 9, lines 16-27);

If more than one end-user sends the print server his certificate at the same time, authentication would take place in batch.

5

As per claim 4, the applicant describes the device of claim 1, which is met by Mandelbaum in view of DeBry (see above), with the following limitation which is met by DeBry:

Wherein each entry in the audit log contains a digest of the received document to which it relates (DeBry: Col 5, lines 62-66; Col 6, lines 1-2);

10

DeBry discloses an audit log for a file server to manage which jobs are being processed in the printing environment. Each entry in the audit log corresponds to a will-call certificate which can contain a unique digital signature of the file source. A digital signature is an encryption of a digest with a private key. Though DeBry discloses the use of an audit log for a file server and Mandelbaum discloses the use of an audit log for a receiving apparatus which prints a received document, the use of a digest would serve the same purpose in each system of verifying the authenticity of the sender and the document

15

It would have been obvious to one of ordinary skill in the art to add the use of a digest as referenced by DeBry to the audit log of Mandelbaum for an extra way to verify the authenticity of the sender and the document.

20

As per claim 8, the applicant describes a device according to claim 1, which is met by Mandelbaum in view of DeBry (see above), with the following limitation which is met by Mandelbaum:

Wherein each entry in the audit log contains the time and date of receipt of each digital document (Mandelbaum: Table 404 of Fig 4);

25

As per claim 9, the applicant describes the device of claim 1, which is met by Mandelbaum in view of DeBry (see above), with the following limitation which is met by Mandelbaum:

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Wherein the unique identifier is an alphanumeric code and the device further comprises an input module for inputting the code to access the relevant entry in the audit log (Mandelbaum: Col 7, lines 7-13);

5 Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mandelbaum in view of DeBry in further view of Fischer, European Patent No. 0386867B1.

As per claim 5, the applicant describes a device according to claim 4, which is met by Mandelbaum in view of DeBry (see above), with the following limitation which is met by Fischer:

10 Further comprising a hash algorithm for creating a digest of a digital document and a receiving module for receiving a digital representation of a previously printed out document, wherein the device is arranged to create a digest of the digital representation of the previously printed out document and to compare the newly created digest with the corresponding digest stored in the audit log (Fischer: Page 17, lines 21-36).

15 Mandelbaum in view of DeBry discloses all the limitations of claim 4. However, Mandelbaum in view of DeBry fails to disclose the use of printing out a document and then scanning it back in to create a new digest for comparison of a stored digest. Fischer describes a system where a document that is printed out can be scanned back in. Upon doing this, a digest of it is created for comparison of it with a saved digital signature to make sure the document is genuine.

20 In the case where a user wants to verify that a printed out document is authentic or was printed out at a particular machine, a newly created digest could be used to reference an audit record via a saved digest. The newly created digest would be compared with saved digests, and if a match occurs, the corresponding audit record is pulled up which can verify whether the document was printed out at the particular machine and what time it was printed out for security or non-repudiation means. It would have
25 been obvious to one of ordinary skill in the art at the time the invention was filed to combine the ideas of Mandelbaum in view of DeBry, which disclose an audit log which maintains a digest of a document, with the ideas of Fischer, which disclose the use of creating a digest of a scanned in document, because the

Wherein the device is arranged to send either a stored digest or a newly created digest of a document to its original sender to verify the authenticity of the document back to its source by considering the transmitted results of a comparison of digests carried out at the source (Page 18, lines 29-36);

As per claim 7, the applicant describes the device according to claim 5, which is met by Mandelbaum in view of DeBry in further view of Fischer (see above), with the following limitation which is met by all three references:

25 ***Claim Rejections - 35 USC § 102***

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 11 is rejected under 35 U.S.C. 102(e) as being anticipated by DeBry, U.S. Patent No. 6,385,728.

As per claim 11, the applicant describes a method of authenticating the identity of a sender of a received digital document comprising the following limitations:

a) using a unique identifier printed on the received document to search for a corresponding record in a list of received document records (Col 8, lines 22-31);

b) referencing a digital certificate associated with the selected record, the certificate being one of a store of certificates of received documents (Col 8, lines 22-31);

c) carrying out an on-line authentication of the certificate (Col 9, lines 16-27);

Regarding part a), the serial number is the unique identifier which is printed on the will-call certificate or received document.

Regarding part b), the store of will-call certificates is the audit log maintained at the file server.

Regarding part c), the printer sends the file server the will-call certificate and its digital certificate (Col 6, lines 22-25) so the file source can verify that the printer is who the printer purports to be by contacting a CA in the same manner as described when the printer contacts a CA to verify that the user is who he purports to be (Col 9, lines 16-34). The applicant should note that DeBry describes validating a received certificate in reference to the receiving printer, but it is inherent that the file server would verify a received certificate in the same manner.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Schubert whose telephone number is (571) 272-4239. The examiner can normally be reached on M-F 8:00-5:00.

5 If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

10 Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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